

FEDERAL COMMUNICATIONS COMMISSION
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August 11, 1993

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Honorable Sam Nunn
United States Senator
75 Spring Street, S.W., Suite 1700
Atlanta, Georgia 30303

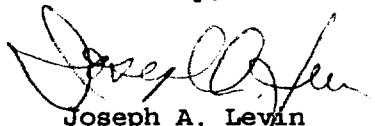
Dear Senator Nunn:

This is in response to your letter of July 13, 1993, in which you inquired on behalf of your constituent, Mr. Philip C. Hankamer, regarding the Notice of Proposed Rule Making (Notice) in PR Docket No. 92-235, 57 FR 54034 (1992). Your constituent is specifically concerned about the potential impact of our final rules on radio remote controlled airplane hobbyists.

Model airplane users have shared spectrum on a secondary basis with industrial users for over 25 years. The low power industrial user and the radio control model airplane hobbyists effectively share spectrum through geographic separation. We are enclosing the Report and Order in GEN Docket 82-181, 47 FR 51875 (1982), which provided the current 50 channels for radio controlled model airplanes. These rules, adopted at the behest of the model airplane community, provide no protection from interference from licensed sources. We further note that the radio environment is inherently hazardous and that even primary allocations suffer from problems. For example, model aircraft users receive interference from other model aircraft users and from certain TV channels. Thus, model aircraft must be, and in fact are, capable of co-existing with some interference.

The Commission is seeking to work with all parties on this matter. To this end, FCC staff has met with the two largest industry groups representing model airplane users, the Academy of Model Aeronautics and the Sport Flyers Association, to discuss their concerns and methods of expanding capacity for private land mobile radio users without affecting radio control users. Thank you for your interest. Your letter will be included in the formal record of this proceeding.

Sincerely,



Joseph A. Levin
Chief, Policy and Planning Branch
Private Radio Bureau

Enclosure

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United States Senate

COMMITTEE ON ARMED SERVICES
WASHINGTON, DC 20510-6050

PRB
92-235

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July 13, 1993

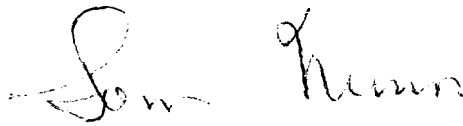
Ms. Laura J. Belvin, Acting Director
Office of Legislative Affairs
Federal Communications Commission
1919 M Street, NW
Washington, D.C. 20554

Dear Ms. Belvin:

I recently received the enclosed inquiry from one of my constituents. Please review the matter thoroughly, in accordance with established policies and procedures, and provide me with a full report.

I look forward to hearing from you in the very near future.

Sincerely,



Sam Nunn

Enclosure

SN/lkj

PLEASE REPLY TO:
75 Spring Street, S.W.
Suite 1700
Atlanta, Ga. 30303
Attn: Laura Johnson

Philip C. Hankamer
3895 Old Fairburn Rd.
Atlanta, Ga. 30331
404-344-9334

Dear Senator Nunn,

Thank you so much for your considerate response to my letter concerning the proposed rule changes by the FCC in Docket 92-235. I have reviewed the report the FCC gave you in response to your inquiry, and I am enclosing a annotated copy of this report with my short comments on each of their numbered answers in this letter.

First, some background. I am a graduate of Georgia Tech, an electronics engineer with 30 years experience in communications, and the president of the Atlanta/South R/C Club. I have some understanding of the technical aspects of the proposed rule changes. Our club has 35 active members of varying backgrounds and means who share a common love of building and flying model aircraft. We carry a 2 million dollar liability insurance policy through our national organization, the Academy of Model Aeronautics, on our flying site; and we actively support young people in the community interested in our hobby.

These numbered comments correspond to the notations beside each of the FCC's answers.

1 & 2) These answers basically establish and emphasize our status as *unlicensed and secondary* users. Their attitude seems to be that anything that adds to the quality of life of the citizens is necessarily secondary to the radio manufacturers desire to make money.

3) The FCC says we are concerned. Very true.

4) The FCC says that occurrences of interference have been rare in the past. This is true because no one else has been permitted to legally operate on our frequencies in the past.

4.1) This statement that the plane would remain under control because no other user would be on exactly the same frequency is simply *not true*, since; although the FCC forgot to mention it in their response to you, they *will* allow the new users a frequency tolerance wide enough for them to legally be *exactly* on our frequency with *more* output power than we are allowed.

4.2) Not true. Same reason. They don't *assign* channels on our frequencies, but they will allow them to legally *operate* on our frequencies.

4.3) This seems to be a tacit admission that interference will probably occur. Since our flying site is in an area of industrial construction, we will probably be very susceptible.

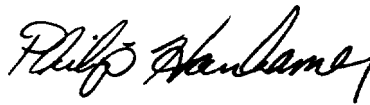
6) Not true. Modelers would have to have far more sophisticated and expensive radios, if they could be developed, to safely cope with the proposed environment.

This letter is necessarily a succinct commentary on a complex technical problem.

I would welcome the opportunity to sit down with you and spend a few minutes answering any questions you might have to help you to understand the more technical aspects of this proposal and it's probable impact on your constituents. We have a monthly club meeting the first Tuesday of each month at the Fairburn, Ga. library (10 min. from the Atlanta airport) that you are welcome to attend. Or, if an expanded and more technically oriented written statement of our position would be more helpful, then please advise me of this fact.

Finally, the single most important point I should make, is to emphasize the fact that at many of our meets and flyins throughout the country there are over a hundred spectators and flyers in attendance. The thought of losing control for only a few seconds of a 30 pound airplane traveling at over 100 mph in the proximity of that many people would represent an unacceptable risk to life and property. The FCC just does not seem to understand or appreciate this danger. We simply would not be able to fly under these circumstances.

Yours Truly,

A handwritten signature in cursive script, appearing to read "Philip Hankamer".

Philip Hankamer

Subject: Radio Control in the 72-76 MHz band

Question: What is the 72-76 MHz band used for?

① Answer: The frequency range between 72-76 MHz is primarily a guard band between TV channels 4 and 5. Specifically, the channels between 72 and 76 MHz are licensed for use by 1) private and common carrier fixed station use at up to 300 watts output power (private and common carrier fixed use occurs on the same channels) and 2) private land mobile use at up to 1 watt output power. The channels between 72 and 76 MHz are also available for unlicensed secondary use by remote control operators of model aircraft, boats and cars at .75 watts output power.

Question: What is the relationship between fixed and mobile land mobile operations and radio control operations?

② Answer: Radio control channels are located between fixed and mobile channels. The radio control channels overlap with the fixed and mobile channels. Radio control operations are unlicensed and are secondary to fixed and mobile operations. This means that radio control operations must accept interference from fixed and mobile users, and may not cause interference to such users.

Question: What changes are proposed in PR Docket 92-235 that have raised the concern of radio control operators?

③ Answer: We have proposed that over a 20 year period, 20 kHz mobile channels in the 72-76 MHz band be replaced with 5 kHz mobile channels. (See the attached page.) Apparently, radio control operators believe that this would make many of their frequencies unusable.

Question: Private land mobile, common carrier, and radio control users have peacefully shared spectrum in this band for many years. Would these changes lead to problems between various classes of users?

④ Answer: We can not categorically state that authorized mobile operations under the current or proposed rules could never harm radio control operations. However, in practice, all types of users can and do operate without conflict, although there are rare occurrences of interference between these users. We believe that under our proposed rules they should remain rare.

④.1 First, permitted power levels for both services are comparable. (For radio purposes, 3/4 of a watt is indistinguishable from 1 watt.) In approximate terms, this means that even if a factory and a radio control hobbyist shared a channel, which they would not under this proposal, the radio control user's model airplane would continue to stay under control as long as the plane is reasonably closer to the hobbyist's radio transmitter than the factory's radio transmitter. The fact that two users would not be using the exact same frequency significantly reduces risk of interference.

Second, radio control transmitter standards are stricter than they used to be. The proposed narrowband technical requirements are much stricter than current requirements. Thus, a 2.5 kHz frequency separation between land mobile and radio control users should be adequate given modern radio control equipment and the proposed land mobile equipment.

Third, land mobile operations authorized on the 72-76 MHz band are not car phones. Rather, these channels are used in limited locations such as a factory or construction site, mainly for non-voice operations to monitor or control expensive equipment such as overhead cranes. Model airplane enthusiasts seek clear areas and fields. Thus, the two classes of users rarely notice each other. The proposed technical standards would not change this important fact.

Question: Would the technical rules for the fixed users be changed?

Answer: No. We are not proposing technical changes because such changes could have a significant adverse impact on other users, including mobile users and radio control operators.

Question: Would any changes be required of radio control users?

Answer: No. Current technical and operational requirements for radio control operations are compatible with the proposed changes for private land mobile radio use.

Finally, we recognize that our proposed rules are based on the information available at the time we wrote them. We seek constructive information in order to adopt final rules that meet our objectives of expanding capacity for private land mobile radio users with minimal or no harm to all existing users of the spectrum.

Atlanta/South R/C Club
Club Roster 1 June 93
AMA Charter # 3258

Steven Adamson	130 Lulwater Court	Fayetteville, Ga.	30214	599-6280
Dave Allen (I)	6354 Shannon Pkwy. 24-A	Union City, Ga.	30291	969-0952
Edward Banke	1657 E. Fayetteville Rd.	Riverdale, Ga.	30296	996-8703
Paul Benson	3690 Will Lee Rd.	College Park, Ga.	30349	761-3936
Charles Bishop	5499 Koweta Rd.	College Park, Ga.	30349	969-2307
Cliff Brannham	450 Roxbury Dr.	Riverdale, Ga.	30274	471-3535
Phil Carcich	245 Middling Ln.	Fayetteville, Ga.	30214	461-2876
Randy Clason	70 Park Timbers Dr.	Sharpsburg, Ga.	30277	251-5203
Jimmy Coley	6245 Campbellton Rd.	Fairburn, Ga.	30213	964-3057
Sloan Daily (I)	Rt #1 Box 36 Lees Mill Rd.	Fairburn, Ga.	30213	969-8866
Ron Dennison	155 Hillcrest St.	Fairburn, Ga.	30213	969-5446
Rick D'Errico	210 Montego Trail	Tyrone, Ga.	30290	631-1594
Lenard Ebert	1173 Highway 54 West	Fayetteville, Ga.	30214	461-8042
Edie Faulkner	255 Kari Glen Dr.	Fayetteville, Ga.	30214	719-1008
Lonnie Fuller	190 Morning Springs Walk	Fairburn, Ga.	30213	468-4379
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Robert Lohr	900 Hip Pocket Rd.	Peachtree City, Ga.	30269	487-7516
Bobby Lohr	900 Hip Pocket Rd.	Peachtree City, Ga.	30269	487-7516
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